

WHAT IS CLAIMED IS:

1. An ice detector for providing a signal indicating ice formation, the ice detector comprising:

a probe protruding into an airflow; and
a strut from which the probe extends into the airflow, the strut having a notch formed therein in an upwind direction relative to the probe.

2. The ice detector of claim 1, wherein the notch is disposed and arranged such that it causes the airflow to increase in turbulence prior to reaching the probe, thereby increasing heat transfer from the probe to lower the actual temperature of the probe.

3. The ice detector of claim 2, wherein the notch is formed as a cylindrical shaped cavity in a surface of the strut adjacent to a point of extension of the probe from the strut.

4. The ice detector of claim 2, wherein the notch is formed as a v-shaped cavity.

5. The ice detector of claim 2, wherein the notch is formed as a rectangular shaped cavity.

6. The ice detector of claim 2, wherein the surface of the strut adjacent to the point of extension of the probe is a curved surface that accelerates the airflow before it reaches the probe.

7. The ice detector of claim 2, and further comprising a mounting flange to which the strut is coupled, the mounting flange being configured to be fixed to a surface of an aircraft.

8. The ice detector of claim 7, wherein the probe extends from the strut at an inclined angle relative to a direction that is perpendicular to the mounting flange.

9. The ice detector of claim 2, wherein the probe has a longitudinally extending shape.

10. The ice detector of claim 9, wherein the probe has a substantially cylindrical shape.

11. The ice detector of claim 9, wherein the probe has an ice accreting edge at a distal end of the probe.

12. The ice detector of claim 11, wherein the probe further comprises a flat tip at the distal end of the probe providing the ice accreting edge.

13. The ice detector of claim 9, wherein the probe is a magnetostrictive probe.

14. The ice detector of claim 13, and further comprising excitation and sensing circuitry which vibrates the probe and detects changes in a frequency of vibration of the probe caused by accretion of ice on the probe.

15. An ice detector for providing a signal indicating ice formation, the ice detector comprising:

- a probe protruding into an airflow;

- a strut from which the probe extends into the airflow, the strut having a curved surface adjacent a point of extension of the probe from the strut, the curved surface being positioned in an upwind direction relative to the probe to accelerate the airflow before it reaches the probe.

16. The ice detector of claim 15, wherein the probe has a longitudinally extending shape and an ice accreting edge at a distal end of the probe.

17. The ice detector of claim 16, wherein the probe further comprises a flat tip at the distal end of the probe providing the ice accreting edge.

18. The ice detector of claim 15, wherein the probe has a substantially cylindrical shape.

19. The ice detector of claim 15, wherein the strut has a notch formed therein in the upwind direction relative to the probe, the notch being disposed and arranged such that it causes the airflow to increase in turbulence prior to reaching the probe, thereby increasing heat transfer from the probe to lower an actual temperature of the probe.

20. The ice detector of claim 19, wherein the notch is formed as a cylindrical shaped cavity in the curved surface.

21. The ice detector of claim 15, wherein the probe is a magnetostrictive probe, the ice detector further comprising excitation and sensing circuitry which vibrates the probe and detects changes in a frequency of vibration of the probe caused by accretion of ice on the probe.